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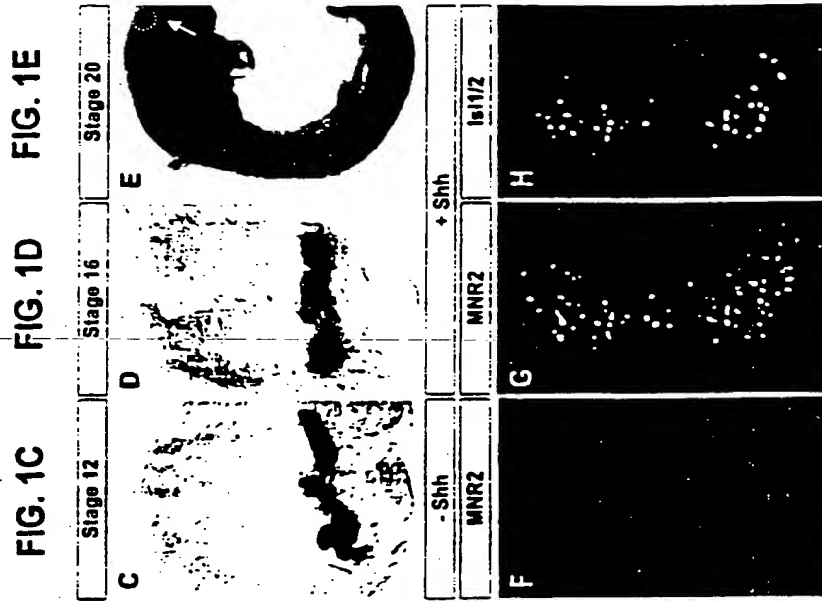
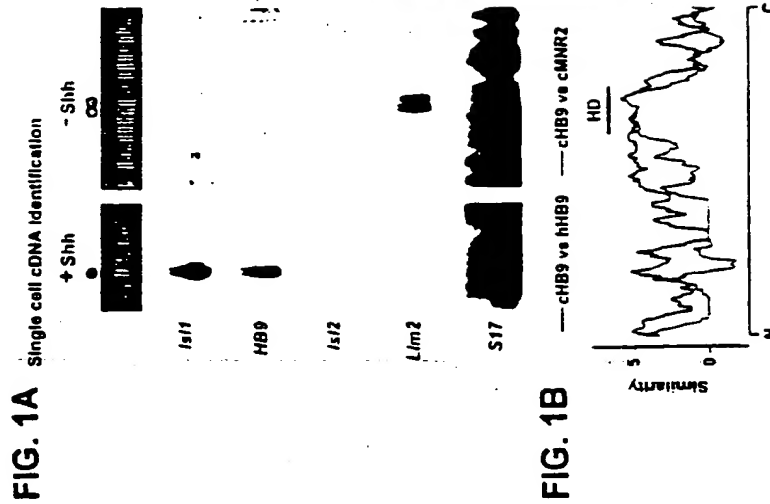


FIG. 2A FIG. 2B FIG. 2C FIG. 2D FIG. 2E FIG. 2F

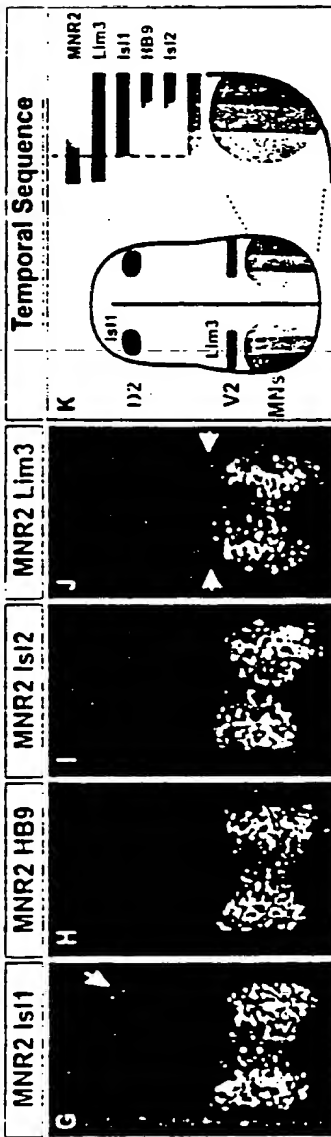
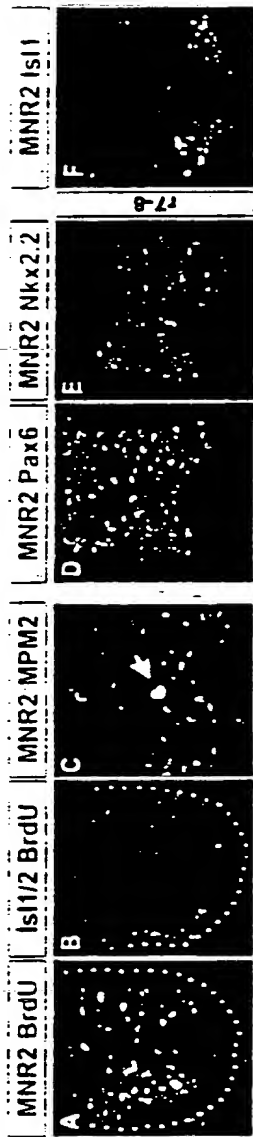
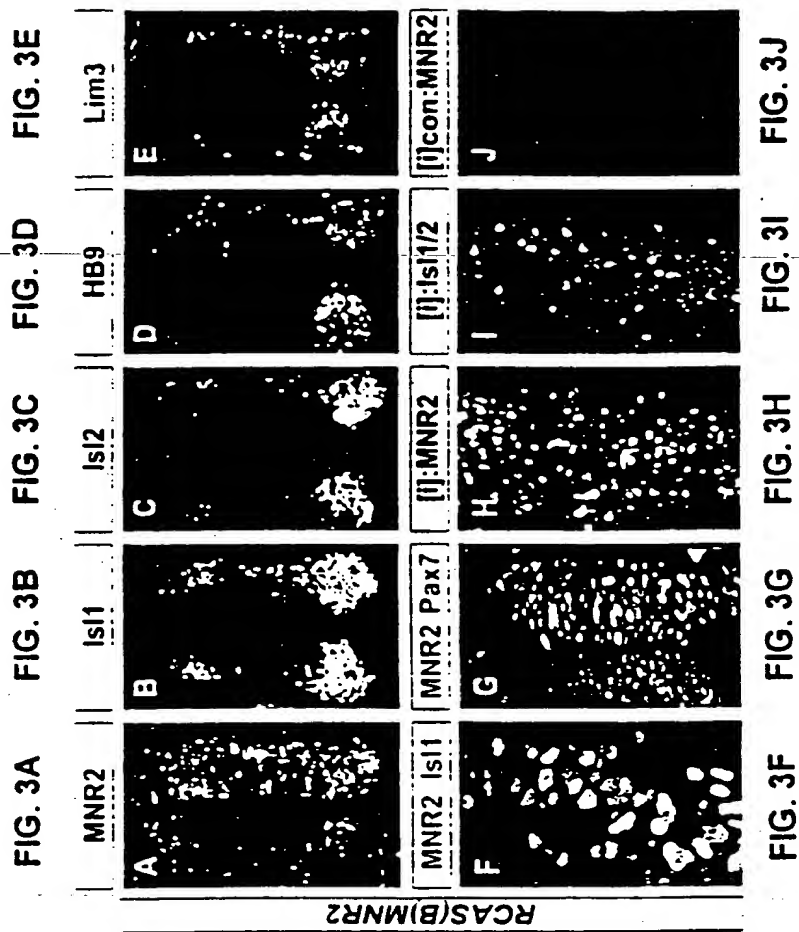


FIG. 2G FIG. 2H FIG. 2I FIG. 2J FIG. 2K



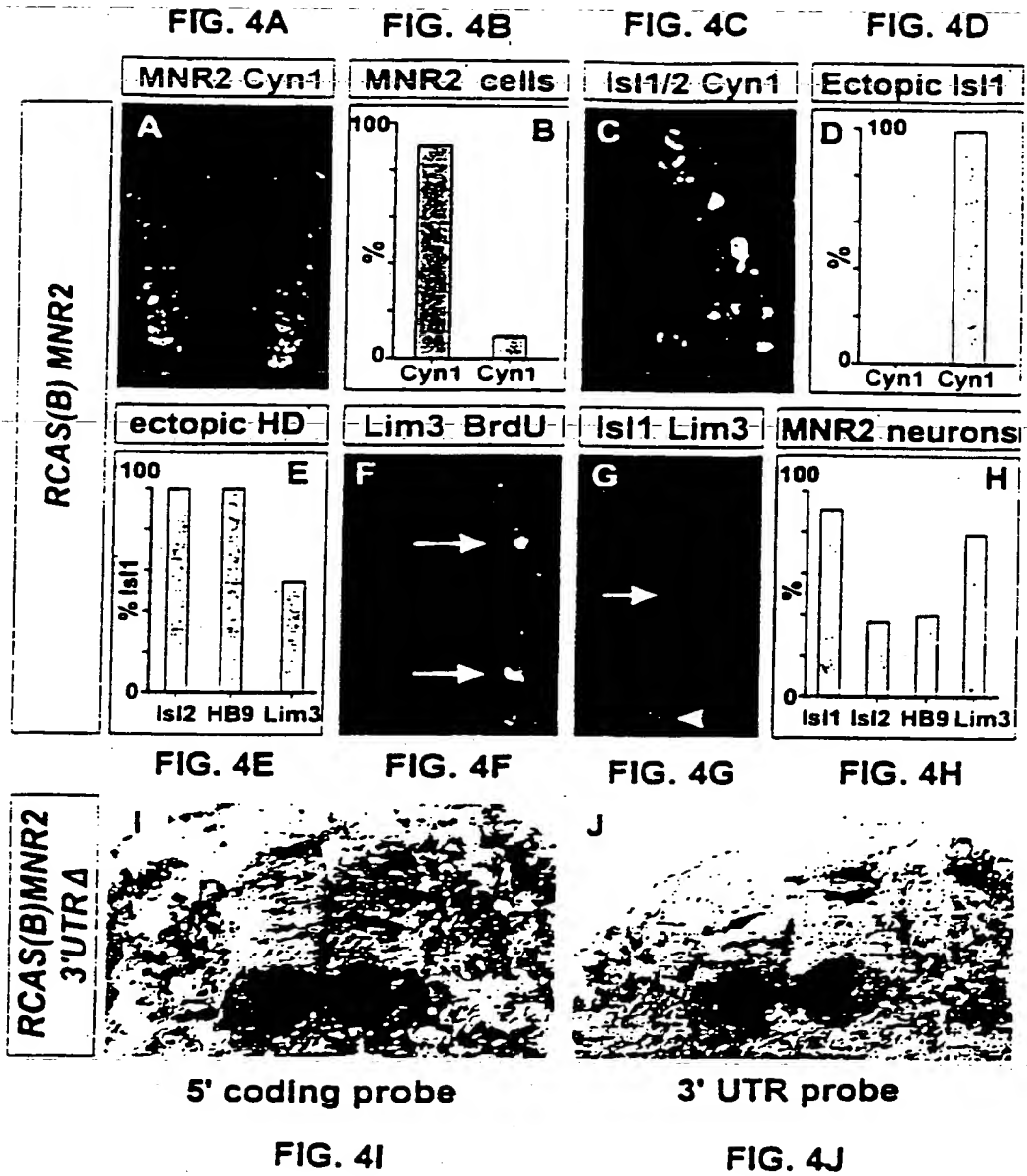


FIG. 5A

FIG. 5B

FIG. 5C

FIG. 5D

FIG. 5E

SI.24		SI.27	
uninfected	RCAS(B)/MNR2	uninfected	RCAS(B)/MNR2



uninfected		RCAS(B)/MNR2	
FITC-Dx Isl1/2	FITC-Dx Isl1/2	FITC-Dx Isl1/2	FITC-Dx MNR2

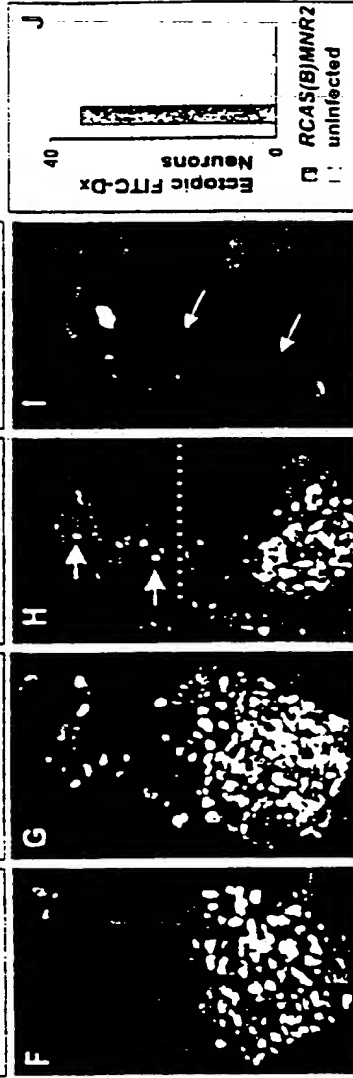


FIG. 5F

FIG. 5G

FIG. 5H

FIG. 5I

FIG. 5J

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FIG. 6A FIG. 6B FIG. 6C FIG. 6D FIG. 6E

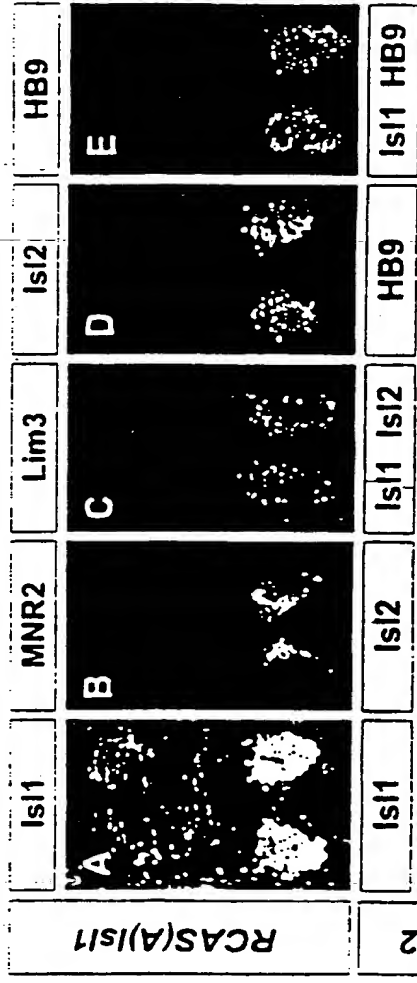


FIG. 6F FIG. 6G FIG. 6H FIG. 6I FIG. 6J

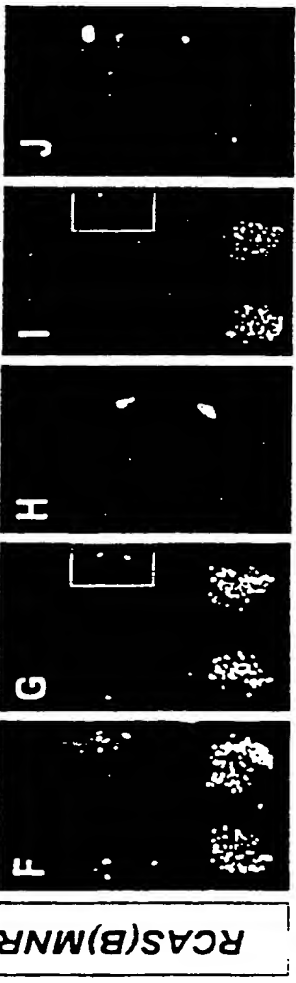


FIG. 6K FIG. 6L FIG. 6M FIG. 6N

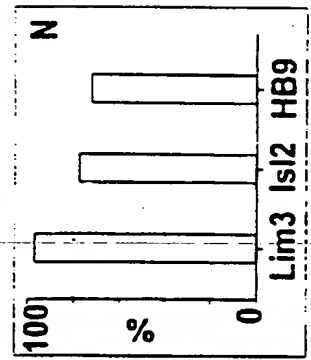
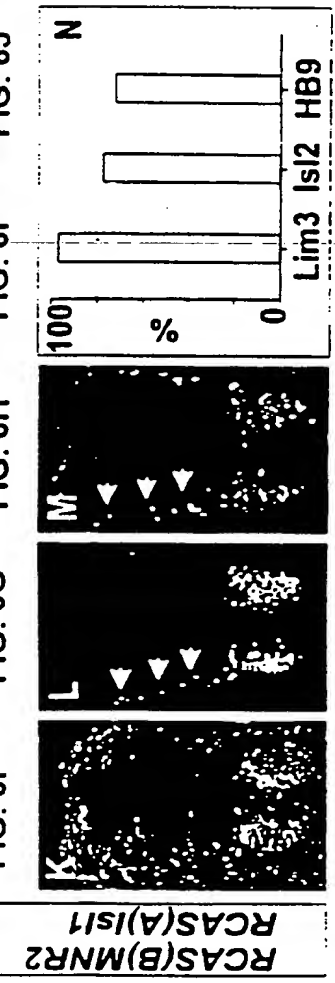
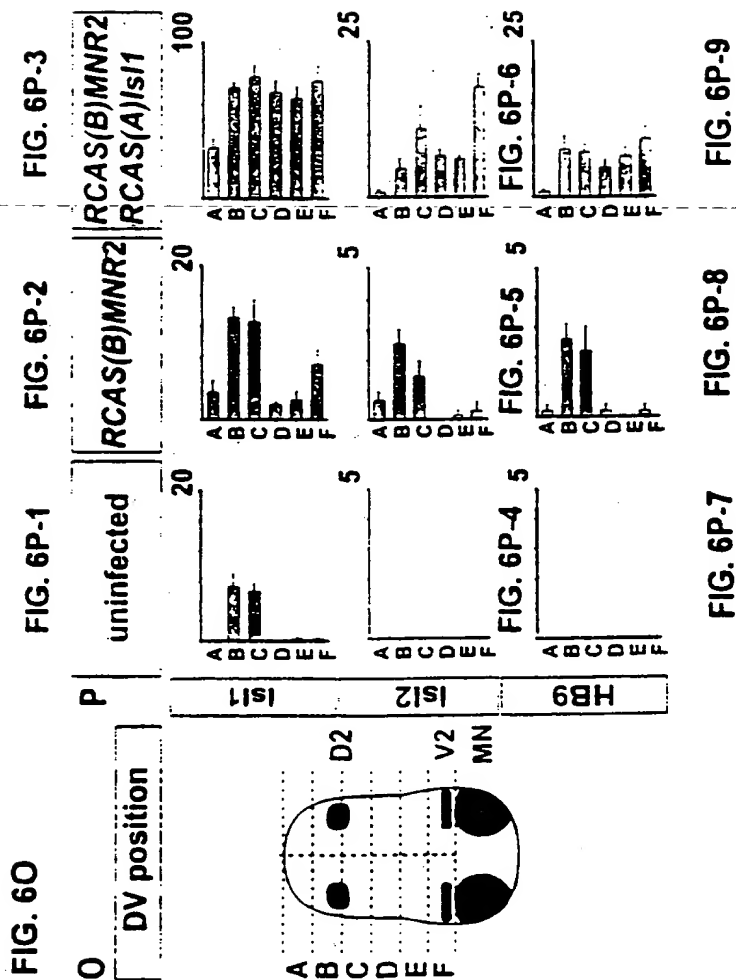


FIG. 6N

FIG. 60





FOOOO" 365022660

FIG. 7A FIG. 7B FIG. 7C FIG. 7D FIG. 7E FIG. 7F FIG. 7G

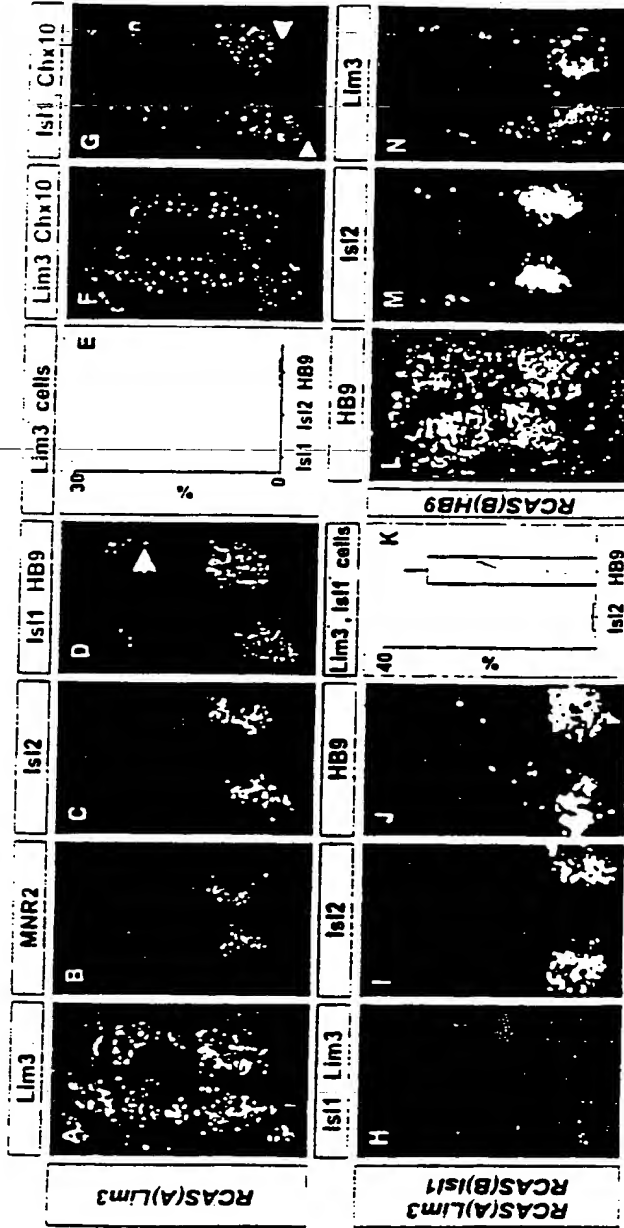
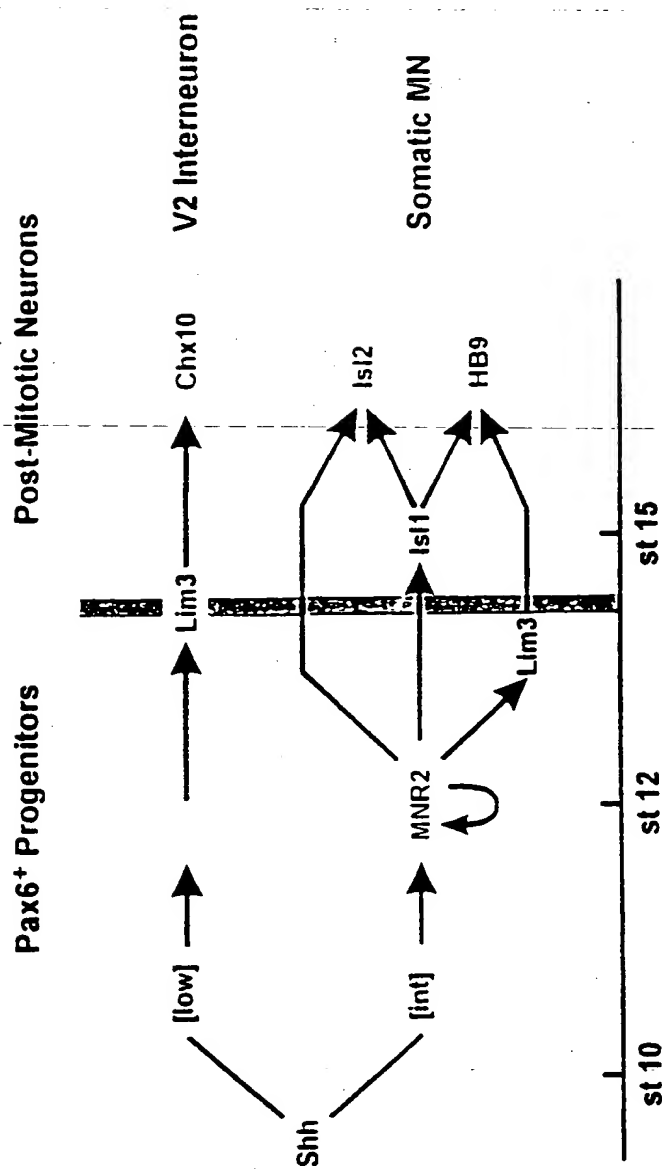


FIG. 7H FIG. 7I FIG. 7J FIG. 7K FIG. 7L FIG. 7M FIG. 7N

FIG. 8



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FIG. 9A  
Interneuron Pattern

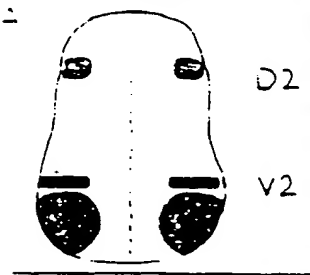


FIG. 9B  
RCAS B.MNR2



FIG. 9C

LH2



FIG. 9D

Isl1

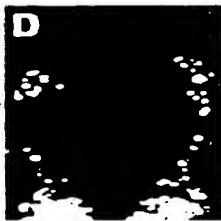
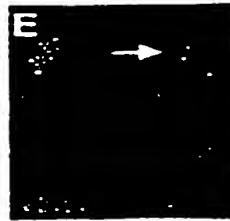


FIG. 9E

LH2 Isl1



D1

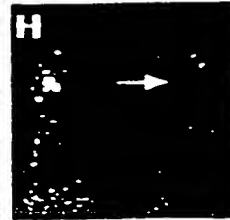
Brn3.0



Isl1



Brn3.0 Isl1



D2

FIG. 9F

FIG. 9G

FIG. 9H

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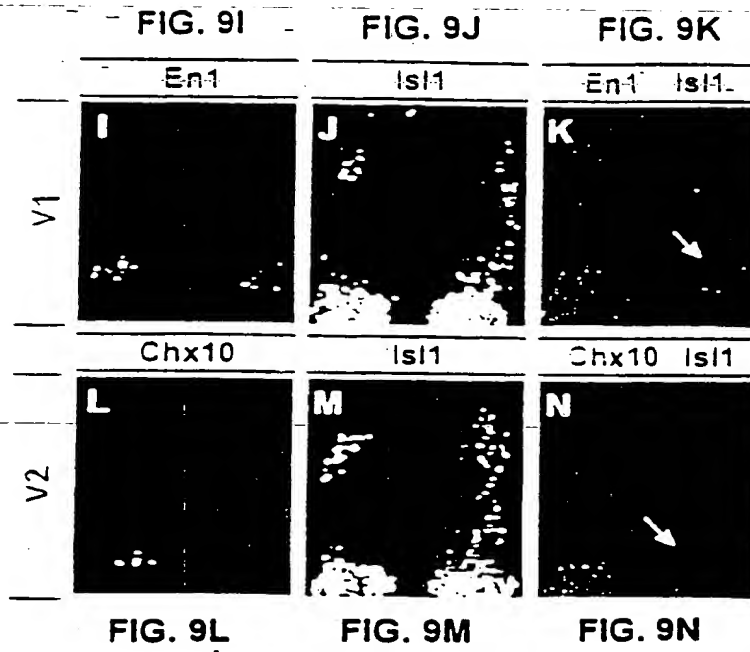


FIG. 9I

FIG. 10

SEQ. ID NO. 1

cMNR2-protein

1 MIKPMESQN FRIEALLAEK PPRSASPPGL SPAGSPGPAG RTDTPSPRAP QAATPIGPAG  
61 FVPKPGLLHL PGPGGLGTIPA LYPPAVYPLP ALGGQHAFA YTAFPQLPPP GAEHLKAAVA  
121 GSFPLEQWIR AGMLVPRLSD FHATPQSALM GKSRRPRTAF TSQQILLELEN QFKINKYLSR  
181 PKRFEVATSL MLTETQVKIW FQNRMRKWK SRKAKEQMA VEPEKPRGIG KADESILPSQ  
241 PQQAGDSPE FVGCSPTGTF LCRSAELGYD PDSSCSGGEE DEEEEDDGMD TAERKMGSVI

FIG. 11 cMNR2-dna

SEQ. ID NO. 2

1 CAGATCTGCT CCCAGATGCT CTGCCCTCCTCC TCGAAGGGCA GAGTCGGTGG GTCCGGGCCA  
 61 GCTCTGCTCC TGCTCACC CG CCTGTCCCAG AGCAGCCCAAG GCTTTCATCT CCACCTGTCT  
 121 CTGGTGCCTT CACCTGGAGA AGACCAAAACC GAGCAAAATA ATAACAATCT GCCCGTATGC  
 181 ACCTGCTCCA TGGGCTTCTT GGGCGGATAG ACGATGCAGG GTGTGTGGCCC CTGCGTGCAG  
 241 CCAGCTCGGG CCGGCTGAIG TCCCCGTGCC AAAGAGGTGC AAAGAGGAAC GCCACGGGGT  
 301 GTGAAGAGCA GGAATGGGCC CCGGGTGTG CCGAGGGGCT GCGAAGCCG GCGAGGAGG  
 361 GCCGGGCCGA CCGGGCGGGG GGCGGGCGG GAGCCAAATAG GGAGCTGGGG CAGCTGGAGG  
 421 GGGGGGTAA AACCCCCCG GTGGCGCGG GCAAGCGAGT GCCCGGAGG AGGAGCGGTG  
 481 AGGAGGGCTG CCCCAGAGG CAGCGGAGGC CCGCGCGGC CCGCGAGTGA ATGCCCGCGG  
 541 GTGCCCGGGT GCGCCGCGGC TGCCCGCGCG GCGCTGCCC TGGCAGCCGA GCGCGCGGG  
 601 GAGGCACTT GCGTATTCG GGGGCCCGG CCGGCCATAG ACAACCCAT GGAGAAGTCC  
 661 CAAACTTCC GCATCGAGC GCTCCTGGCT GAGAAGCCG CCGGAGCGC CTCTCTTCCG  
 721 GGGCTCAGCC CCGCGGCGAG CCGCGGCCG CCGCGGCCG CCGCGGCCG CCGCGGCCG  
 781 GCTCCCCAG CCGCACCCG CCGCGGCCG CCGCGGCCG CCGCGGCCG CCGCGGCCG  
 841 CACCTCCCCG GCGCGGGCT GGGACCCCT GGGACCCCT CCGCGGCCG CCGCGGCCG  
 901 CTGCGCGGCT TGGGGGGCA GCACCGCGT TCGCCCTACA CCGCTTCCC CCGCTGCGG  
 961 CCGCGCGGCT CCGAGACCT GAAGCGGCG GTGGCGGGT CCGTCCCCT GCGAGCTAGG  
 1021 ATCCGAGCG GGAATGCTGCT GCGAGGCTC TCCGACTTCC ACGCCACCCC ACAGTCCGCC  
 1081 TTGATGGGA AGTCCGCGG GCGCGGCCG GCGCGGCCG GCGCGGCCG GCGCGGCCG  
 1141 GAGAACCAGT TCAAGCTTCAA CAAGTATCTG TCCAGGCCCA AGCGCTTCCA GTGGGCCAG  
 1201 TCGCTGATGC TCATCGAGC GCAGGTGAAG ATCTGCTTCC AGAACCGCG CATGAAGTGG  
 1261 AAGCGGAGC GCAAGGCCA GGAGCAGGGG ATGGCAGTGG AGCCCCGAGAA GCCACGGGG  
 1321 CTTGGCAAG CTGATGAGAG TCTGCTGCC AGCCAGCCC AGGGACAGG TGGTACACG  
 1381 CCGGAGTTG TGGGTGCGAG CCGCGGAAC GCGTCTCTGT GCGCGAGCG CCGCGTGGC  
 1441 TATGACCCCG ACTCTTCTG TTCAAGGGGA GAGGAGGATG AGGAAGAGGA GGACGATGG  
 1501 ATGGACACTG CCGAGAGGA GATGGGCTCT GTGTGTGAA GAGGTCTCCG GTTGAAGAT  
 1561 TGGACCACTC TCGGCTGGCA GACACAGCT GTGCCCATGT GCAGCGTGG GGTGAGGG  
 1621 AGCTGCCCC CCCCCCTCTT TAACCTATGT GTGTGTTGAG TCTATTTAAT GTTAATTAT  
 1681 TCCGTGTGTG ATCTTGGGGT TTCCCCACAT CCCTCCCCTA TAAAGCTGTT ATCCGG

FIG. 12

SEQ. ID NO. 3

CHB9-protein

1	MEKSKNFRID	ALLAVDPPKA	AAQSAPLALV	TGGSGGGSPP	SSSSSSSSSS	SSSSSELPADC
61	PRTDSPSPPR	LLPAHICALLP	KAAFLGGGGP	GGGHPQHIAL	GLHPAGPGGP	GLYGHPPVYGY
121	PALGGQHIAL	SYSYSQVQGA	HPAHPSADPI	KLSAGTFQLD	QWLRASTAGM	ILPKMPDFGS
181	QAQSNLLGKC	RRPRTAFTSQ	QLLELEHIOFK	LNKYLSPRKR	FEVATSLMLT	ETQVKIWFQN
241	RRMKWKRQKK	AKEQAAQEAE	NEKGGGGGED	KSGPRELLLP	GPEKGGGRRL	RELDPSEPED
301	EEEEEEEEEE	AEAGRC'CPYH	SSDCSEADEE	DSQSGGRPGA	PPPPPAQPQ*	

FIG. 13

SEQ. ID NO. 4

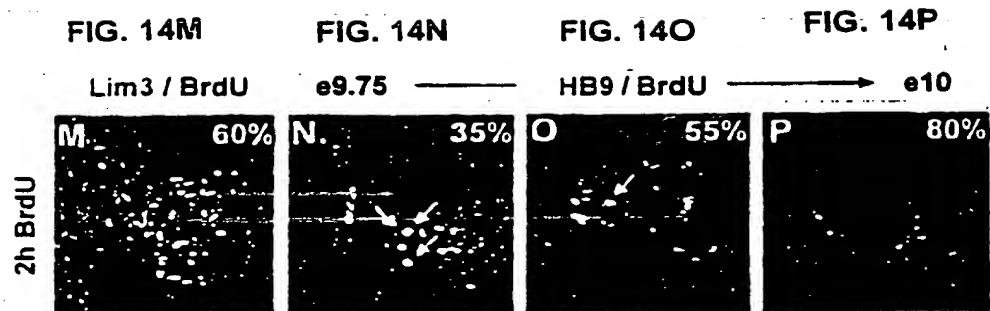
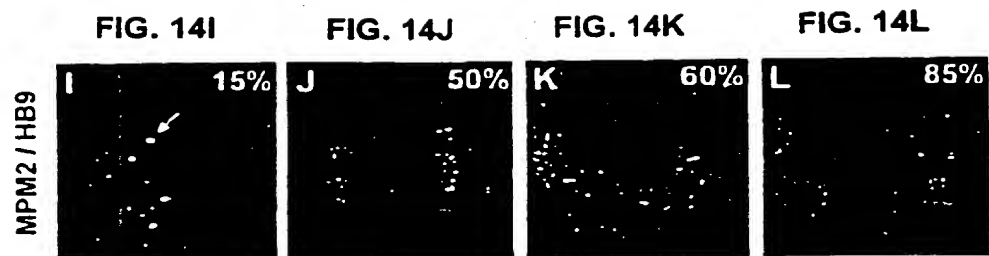
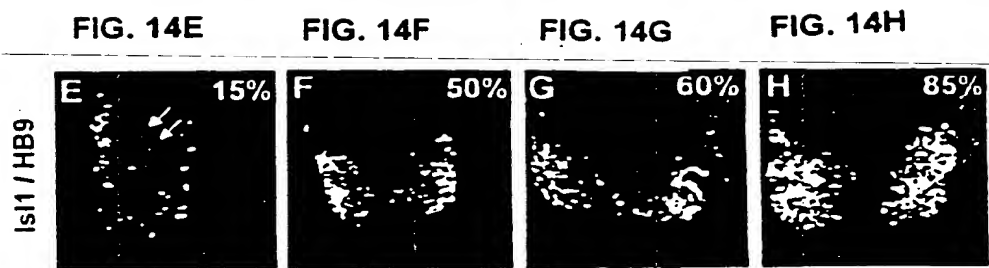
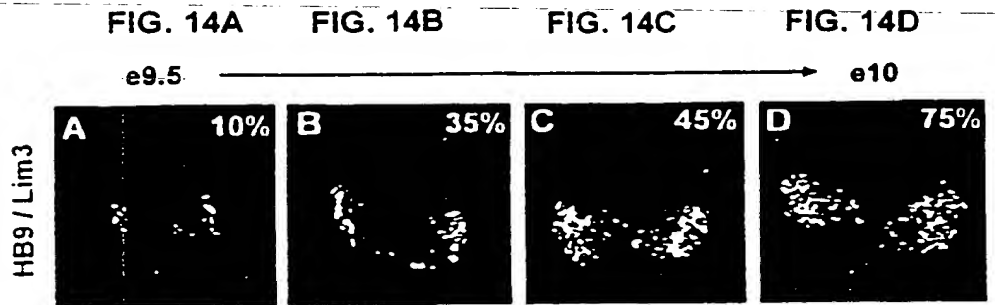
cHB9 - DNA

```

1  CCGGGCTGGC  CTCTCGCCGC  CTCCGCCGCT  CCCATGGAAA  AAATCCAAAA  TTTCGGCATC
61  GACGCGCTGC  TGGCTGTGGA  TCCCCCAAG  GCGGGCGCG  AGAGCGCTCC  GCTGGCCCTG
121  GTCACCGCG  GCTCCGGGG  CGCAGCCCT  CCGTCTCTG  CGTCTCTCTC  GTCTCTCTG
181  TCTCTCTCT  CTCTCGAGCT  CCGCGCCGAC  TGCCCCGGA  CCGACAGCC  CTCTCTCTCT
241  CGCCTGCTGC  CCGCGCACTG  CGCGCTGCTG  CCAAAAGCCG  CCTTCTCTGG  CGGGGGGGA
301  CCGGGGGCG  GCCACCGCA  GCACCAGCC  CTGGGGCTGC  ACCCGCGCG  GCCGGCGGG
361  CCGGGCCCT  ACGGGCACCC  GGTGTACGG  TACCCGGCT  TGGCGGGCA  GCACCCGGG
421  CTCCTCTATT  CCTATTTCGA  AGTGCAGGA  GCGCACCCCG  CGCATCCCTC  CGCCGACCC
481  ATCAAGCTGA  GCGCCGGCA  CTTTCAGCTG  GACCAGTGG  TCGGGCGAG  CACGGCCGG
541  ATGATCTCT  CCAAAATGCG  CACTCTGGC  TCTCAGGGG  AGTCAAGCT  GCTGGGGAAG
601  TCCCGGGCG  CCGGCACCG  CTTCACCAG  CAGCAGCTGC  TGGAGCTGGA  GCACCACTCT
661  AAACCTCAAC  AGTACCCTCT  CCGGCCAAG  CGCTTCGAG  TGGCCACGTC  GCTGATGCTC
721  ACCGAGACGC  AGGTGAAGAT  TTGGTTCCAG  AACCGCCGA  TGAATGGAA  GCGCCAGAAA
781  AAGCGGAAG  ACCAGGCGG  GCAGGAGGA  GAGAACGAGA  AAGGAGGAG  AGGAGGAGAG
841  GACAAAAGC  GCGCGAGGA  ACTGCTGCTG  CCGGCCCGG  AGAAAGCGG  CGGGAGGCGG
901  CTGAGGGAG  TGCCCGACAG  CGAGCCCGAG  GACGAGGAG  AGAAGAAGA  GGAGGAAGAG
961  GAGGCCGAG  CCGGGCGGTG  CTGCCCTAC  CACTCTCTG  ACTGCTCCGA  GCGGAGCGAG
1021  GAGGACTCG  AGTCCGGAAG  ACGGCCCGA  GCCCCCGCG  CACCCCGCG  ACAGTCGAG
1081  TGAGCCACG  GCGGCCCGT  CCGGGCCCG  CCGGCCACG  GAGCTCTCTG  GCGCCGCTCT
1141  CCAATCCGCT  CTCCCATCC  TCCCTGCTG  GAGGGGAGC  CGAAAGGGA  TCTCCCGTCT
1201  GCCGAGCGG  AGGAGGATTT  CACACAGTGT  TATTAATTG  TGAGAGCGG  CCACGACTTG
1261  AGCCCCCTC  CCGCCCCCG  CCTATCGGA  CCGTTTCTCT  CTTACCATAT  ATCGGGAATA
1321  GTGTTTATGT  CATGAACGTT  AAACTGCTG  CAGATCTCA  TACTGTCTTT  ATTTTGTATA
1381  TCCATTATT  AAAAAGCA  AANTGAATTC  CTCCTACTAT  GCATGCTAAA  TTAATTACCA
1441  GCCCCCTCC  CTTGAGGTGG  GGGGAGGAA  TATAAATAA  GAGCGTTTGT  TACTGTGAAA
1501  AAAAAAAAAA  AAAA

```





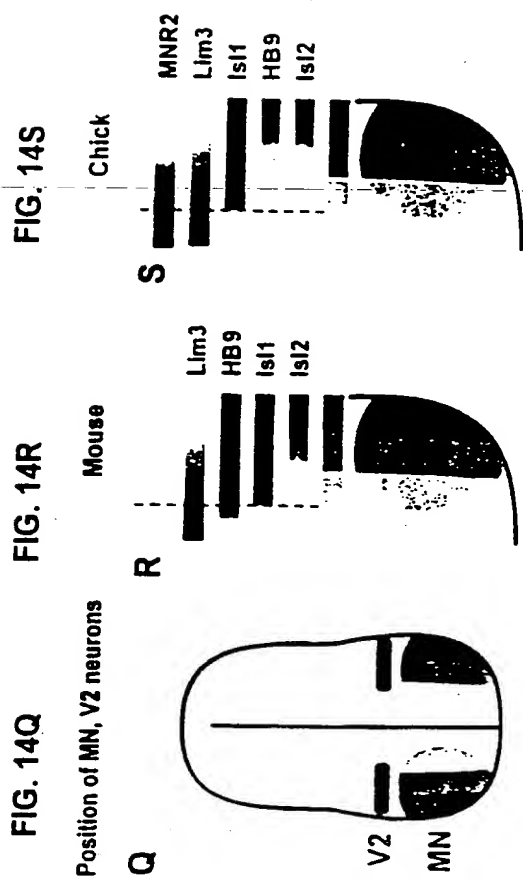
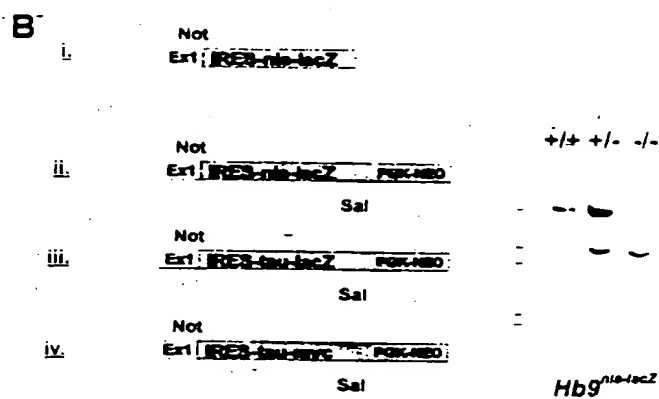
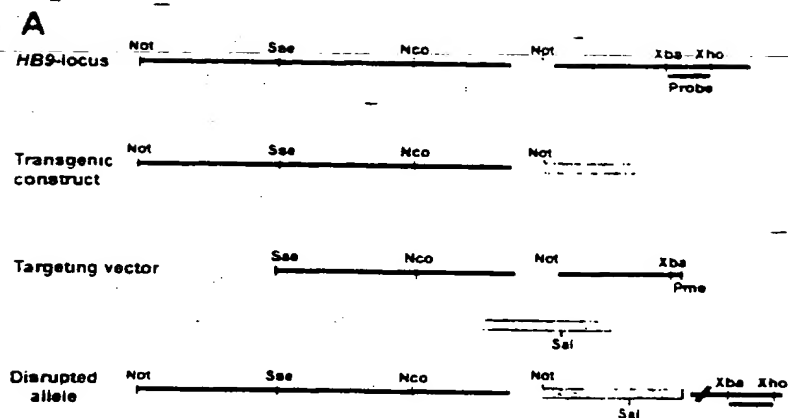


FIG. 15B.



**FIG. 15F:**

**Hb9<sup>taulec Z/taumyc</sup>**

**F**

**FIG. 15G**



FIG. 15H



FIG. 15I

**Gal / HB9**

**Hb9 +/+**

**Hb9 +/-**

**H59 -/-**



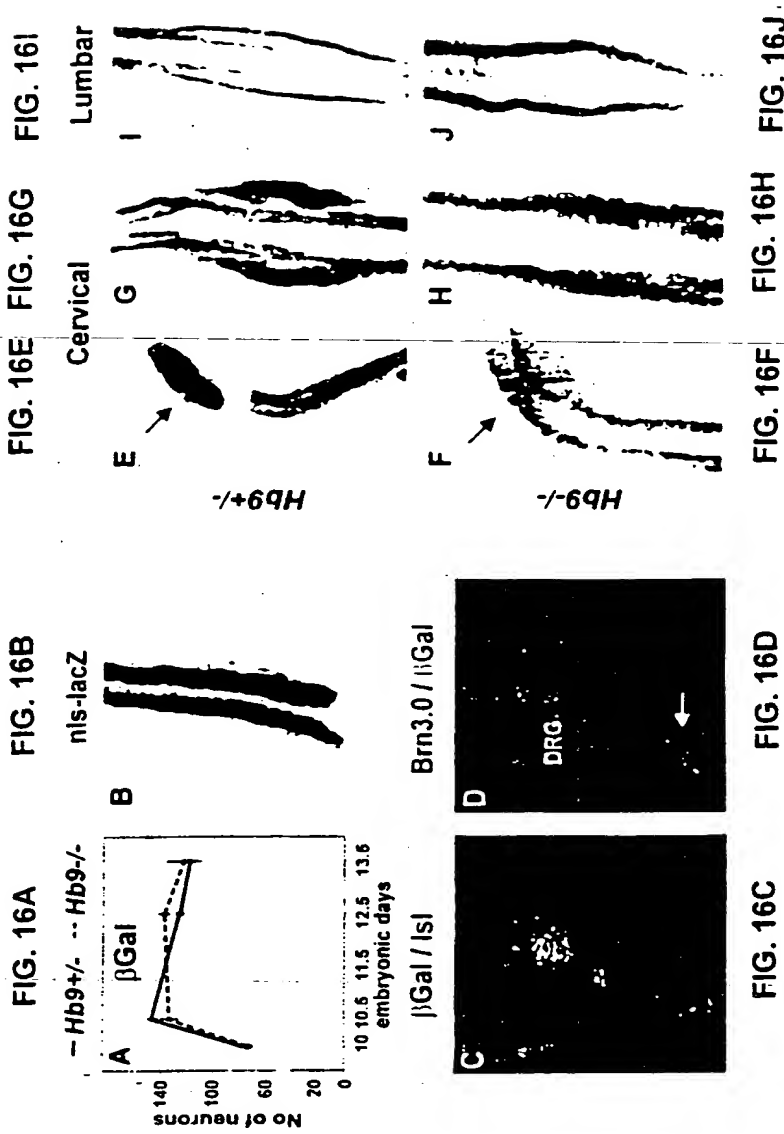
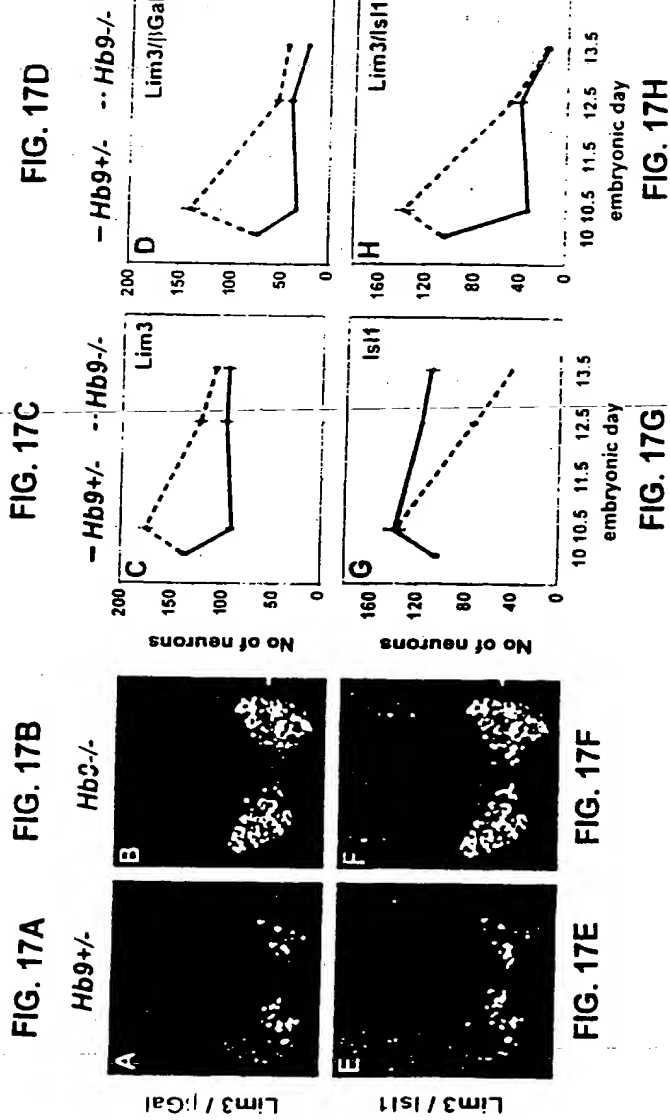


FIG. 17C



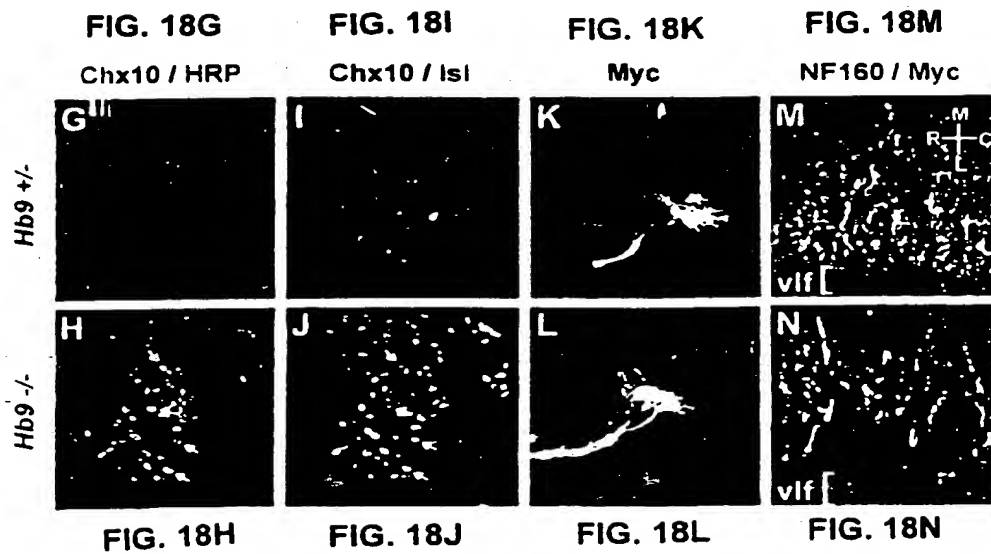
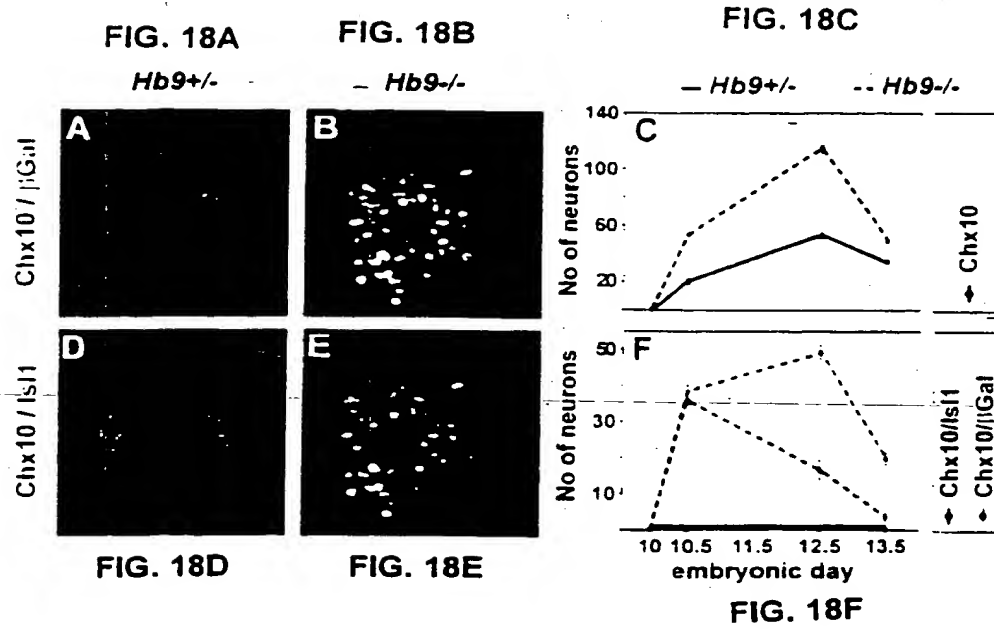


FIG. 19A

## A Progressive MN Specification

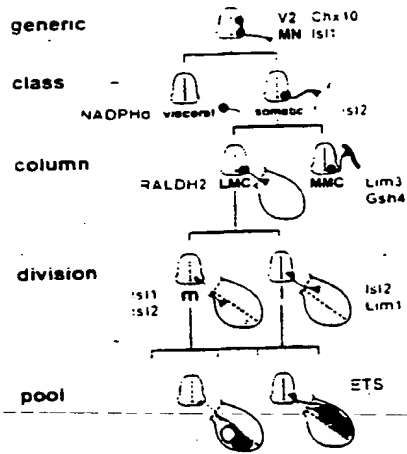


FIG. 19B



FIG. 19C

FIG. 19D

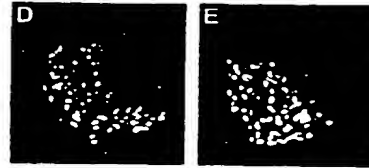


FIG. 19E

FIG. 19F

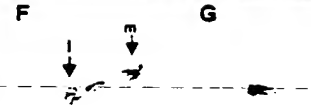


FIG. 19G

FIG. 19H



FIG. 19I

FIG. 19J

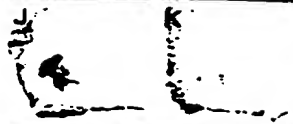


FIG. 19K

FIG. 19L

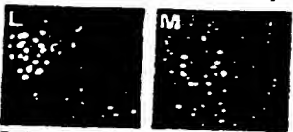


FIG. 19M

FIG. 19N



FIG. 19O

FIG. 20A

FIG. 20B

FIG. 20C

FIG. 20D

*Hb9*<sup>tsulec2/+</sup>*Hb9*<sup>tsulec2/tsulec2</sup>

A

B

C

D

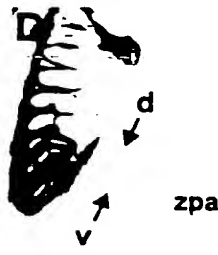
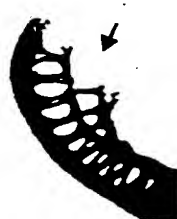


FIG. 20E

FIG. 20F

FIG. 20G

FIG. 20H

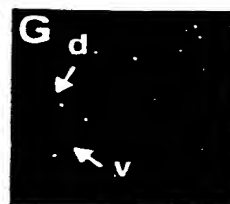
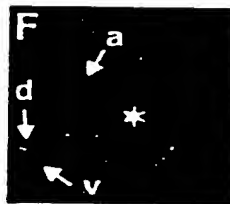
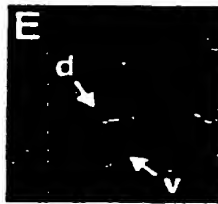
*Hb9*<sup>tsulec2/+</sup>*Hb9*<sup>tsulec2/tsulec2</sup>myc /  $\alpha$ -act

FIG. 20I

FIG. 20J

FIG. 20K

FIG. 20L

*Hb9*<sup>ntslac2/+</sup>*Hb9*<sup>ntslac2/ntslac2</sup>*Hb9*<sup>ntslac2/+</sup>*Hb9*<sup>ntslac2/ntslac2</sup> $\alpha$ BTXGAP43 /  $\alpha$ BTX

FIG. 21

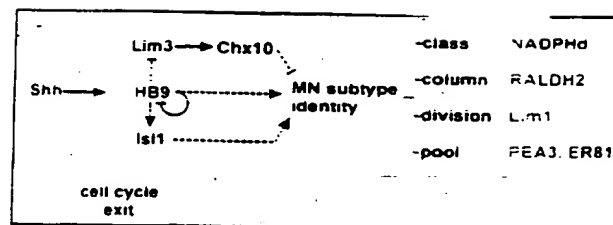




FIG. 22A

E3



FIG. 22C

E8.5



FIG. 22E

E10.5



FIG. 22B

b



FIG. 22D

d



FIG. 22F

f



FIG. 22G

H2b/100



FIG. 22H

H2b/100



FIG. 22I

H2b/100



FIG. 22A, FIG. 22B, FIG. 22C, FIG. 22D, FIG. 22E, FIG. 22F, FIG. 22G, FIG. 22H, FIG. 22I

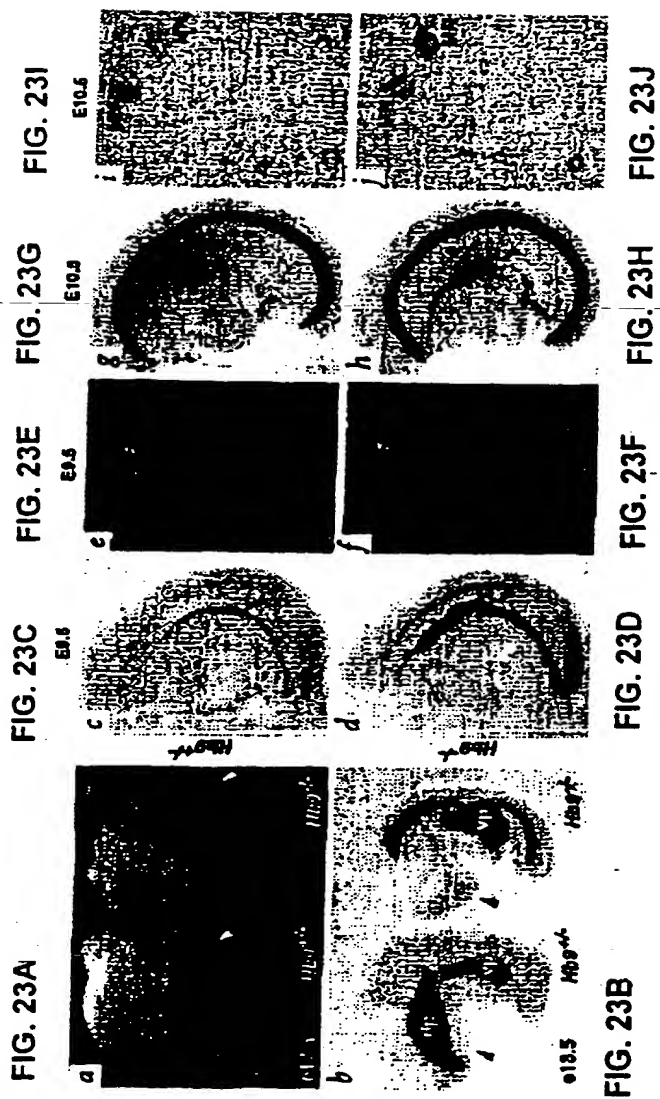


FIG. 24A

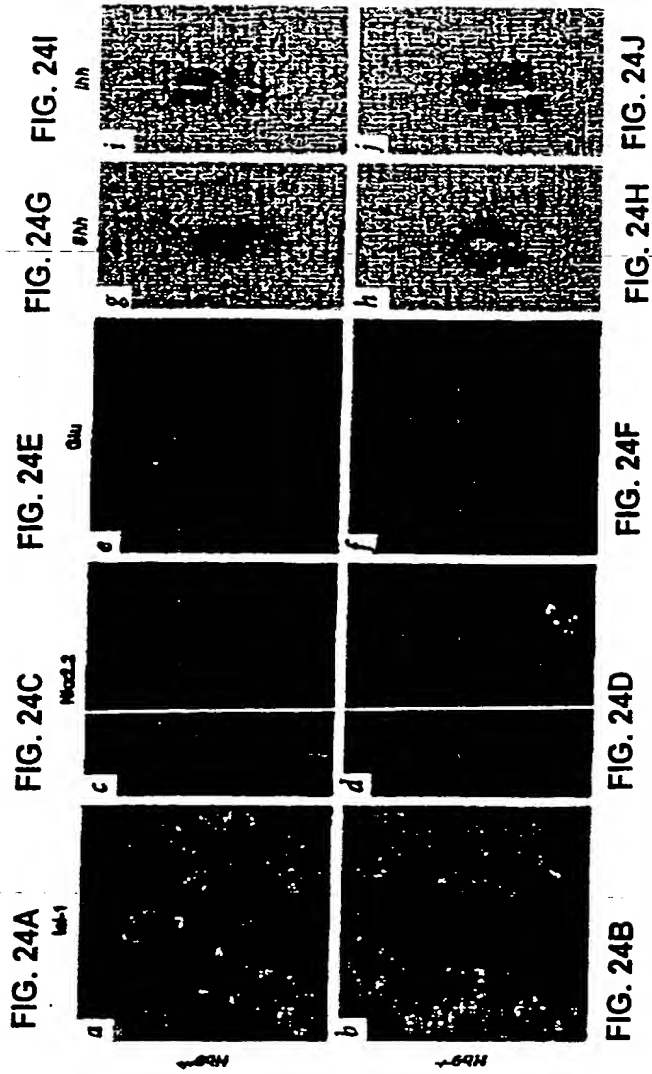

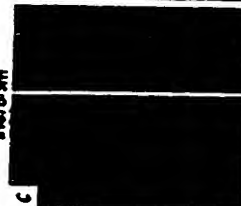





TABLE 20-000000

FIG. 25A	FIG. 25C	FIG. 25E	FIG. 25G	FIG. 25I
				
FIG. 25B	FIG. 25D	FIG. 25F	FIG. 25H	FIG. 25J
